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Research on Clean Indoor Air Initiatives

Bartecchi, C., Alsever, R., Nevin-Woods, C., Thomas, W., Estacio, R., Bartelson, B., & Krantz, M. September (2006). Reduction in the incidence of acute myocardial infarction associated with a citywide smoking ordinance. Circulation. Retrieved September 12, 2008 from http://www.circ.ahajournals.org/cgi/content/abstract/CIRCULATIONAHA.106.615245v1.
Heart attack hospitalizations were assessed in Pueblo, Colo., during a three-year period, six months before and 18 months after implementation of a smoke free ordinance. The authors compared heart attack hospitalization rates among individuals residing within the city limits, the area where the ordinance applied versus those outside the city limits. A public ordinance reducing exposure to secondhand smoke was associated with a decrease in heart attack hospitalizations in Pueblo.

Sargent, R., Shepard, R., & Stanton, G., (2004). Reduced incidence of admissions for myocardial infarction associated with public smoking ban; before and after study. BMJ 328,977-980 Retrieved January 13, 2009 from http://www.smokefreewi.org/pdf/Helena_Study.pdf.
The study was conducted in Helena, Montana (population 68,140) from December 1997 through November 2003. During the six months the law was enforced the number of admissions for heart attacks fell significantly, from an average of 40 admissions during the same months in the years before and after the law to a total of 24 admissions during the six months the law was in effect. The study concluded that laws to enforce smoke-free workplaces and public places may be associated with reduced deaths from heart disease**.**

Pell, J., Haw, S., Cobbe, S., Newby, D., Pell, A., Fischbacher, C., McConnachie, A., Pringle, S., Murdoch, D., Dunn, F., Oldroyd ,K., MacIntyre, P., O'Rourke, B., & Borland, W. (2008). Smoke-free legislation and hospitalizations for acute coronary syndrome. The New England Journal of Medicine, 359, 482-491. Retrieved January 13, 2009 from http://contnet.nejm.org/cgi/content/abstract/359/5/482.
Since the end of March 2006, smoking has been prohibited by law in all enclosed public places throughout Scotland. Information was collected prospectively on smoking status and exposure to secondhand smoke based on questionnaires and biochemical findings from all patients admitted with heart disease to nine Scottish hospitals during the 10 month period preceding the passage of the legislation and during the same period the next year. These hospitals accounted for 64 percent of admissions for acute coronary syndrome in Scotland, which has a population of 5.1 million. Overall, the number of admissions for heart disease decreased from 3,235 to 2,684 – a 17 percent reduction – as compared with a 4 percent reduction in England during the same period and a mean annual decrease of 3 percent in Scotland during the decade preceding the study.

Eriksen, M., & Chaloupka, F. (2007). The economic impact of clean indoor air laws. CA: A Cancer Journal for Clinicians, 57(6), 367-78. Retrieved January 14, 2009 from http://caonline.amcancersoc.org/cgi/content/full/57/6/367.
The authors report that clean indoor air laws are easily implemented, are well accepted by the public, reduce nonsmoker exposure to secondhand smoke and contribute to a reduction in overall cigarette consumption. Currently there are thousands of clean indoor air laws throughout the United States, and the majority of Americans live in areas where smoking is completely prohibited in workplaces, restaurants or bars. The vast majority of scientific evidence indicates that there is no negative economic impact of clean indoor air policies, with many studies finding that there may be some positive effects on local businesses.

Hahn, E. J., Rayens, M. K., Butler, K. M., Zhang, M., Durbin, E., & Steinke, D. (2008). Smoke free laws and adult smoking prevalence. Preventive Medicine, 47(2), 206-9. Retrieved January 14, 2009 from http://www.ncbi.nlm.nih.gov/pubmed/18519154.
The authors evaluated whether the adult smoking rate changed in Lexington-Fayette County, Kentucky, following the enactment of

a clean indoor air public places ordinance. Behavioral Risk Factor Surveillance System (BRFSS) data from 2001-2005 were used to test whether smoking rates changed in Fayette County from the pre- to post-law period, relative to the change in 30 Kentucky counties with similar demographics. The sample consisted of 10,413 BRFSS respondents: 7,139 pre-law (40 months) and 3,274 post-law (20 months). Results of the study showed a 31.9 percent decline in adult smoking in Fayette County (25.7 percent pre-law to 17.5 percent post-law). In the group of 30 control counties, the rate was 28.4 percent pre-law and 27.6 percent post-law. There were an estimated 16,500 fewer smokers in Fayette County during post-law to pre-law. The authors conclude there was a significant effect of clean-indoor air legislation on adult smoking rates.

Khuder, S. A., Milz, S., Jordan, T., Price, J., Silvestri, K., & Butler P. (2007). The impact of a smoking ban on hospital admissions for coronary heart disease. Preventive Medicine, 45(1), 3-8. Retrieved January 13, 2009 from http://www.ncbi.nlm.nih.gov/pubmed/17482249.

The city of Bowling Green, Ohio implemented a clean indoor air ordinance banning smoking in workplaces and public places in March 2002. This study evaluates the effect of this ordinance on hospital admissions for smoking-related diseases. A reduction in admission rates for smoking-related diseases was achieved in Bowling Green compared to the control city. The largest reduction was for coronary heart disease, where rates were decreased significantly by 39 percent after one year and by 47 percent after three years following the implementation of the ordinance. The findings of the study suggest that clean indoor air ordinances lead to a reduction in hospital admissions for coronary heart disease, thus reducing health care costs.

Lee, D., Dietz, N., Arheart, K., Wilkinson, J., Clark III, J., & Caban-Martinez, A. (2008). Respiratory effects of secondhand smoke exposure among young adults residing in a "clean" indoor air state. Journal of Community Health, 33(3), 117-125. Retrieved January 13, 2009, from http://www.medscape.com/viewarticle/572987.

The prevalence of self-reported secondhand smoke (SHS) exposures and its association with respiratory symptoms was examined using a telephone survey sample (1,858) of young adults (ages 18-24) residing in Florida, a state with a partial clean indoor air law. Nearly two-thirds (64 percent) reported visiting a bar or nightclub which exposed them to SHS in the previous month; nearly half (46 percent) reported SHS exposure while riding in automobiles; 15 percent reported occupational SHS exposure; and nearly 9 percent reported living with at least one smoker. Personal smoking behavior, parental smoking history, and exposure to SHS in automobiles and in bars or nightclubs were significantly associated with increased reports of respiratory symptoms. Despite residing in a "clean" indoor air state, the majority surveyed continued to report exposure to SHS, especially in automobiles and in bars. These exposures adversely impact respiratory health. The authors conclude that all municipalities should pursue clean indoor air legislation which does not exempt bars and restaurants.

McCaffrey, M., Goodman, P. G., Kelleher, K., & Clancy L. (2006). Smoking, occupancy and staffing levels in a selection of Dublin pubs pre and post a national smoking ban, lessons for all. Irish Journal of Medical Science, 175(2) 37-40. Retrieved January 14, 2009 from http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=16872027.

In March 2004, the Irish government introduced a comprehensive workplace smoking ban to protect the health of workers. This study evaluates the impact the ban had on staffing levels, customer numbers, and smoking rates in a sample of public houses in Dublin. A total of 38 public houses were visited prior to the introduction of the ban. Each visit lasted at least three hours, and the number of staff, customers and the number of people smoking was recorded each hour. Follow-up visits were conducted exactly one year later, on the same day of the week and at the same time of day, allowing control for seasonal and weekday effects. The results showed a decrease (8.82 percent) in average staff levels while customer numbers increased by 11 percent. There was a dramatic reduction in numbers smoking on a visit to a pub (77.8 percent). The authors conclude that while the hospitality industry predicted major job losses as a consequence of the introduction of the smoking ban, there was no significant decrease in the number of staff employed or in customer numbers.

Stolzenberg, L., & D'Alessio, S. J. (2007). Is nonsmoking dangerous to health of restaurants? The effect of California's indoor smoking ban on restaurant revenues. Evaluation Review, 31(1) 75-92. Retrieved on January 14, 2009 from http://www.ncbi.nlm.nih.gov/pubmed/17259576?dopt=Citation.

The state of California passed the Smoke-Free Workplace Act on January 1, 1995. Many restaurant owners, especially owners of restaurants that served alcohol, opposed the ban for fear that businesses would be affected adversely because of the loss of patrons who smoked. The authors assessed the effect of California's indoor smoking ban on revenue rates for all restaurants, for non-alcohol-serving restaurants, and for alcohol-serving restaurants. Results show that revenues for alcohol-serving restaurants dropped by about 4 percent immediately following the establishment of the indoor smoking ban. However, this reduction was temporary because revenues for alcohol-serving restaurants quickly returned to normal levels. Findings also revealed that the indoor smoking ban had little observable impact on the revenue rate for restaurants overall and for non-alcohol-serving restaurants.